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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,245

01/27/2005

Takefumi Niki

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EXAMINER

REIFSNYDER, DAVID A

ART UNIT

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1797

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,245	<b>Applicant(s)</b> NIKI ET AL.	
	<b>Examiner</b> David A. Reifsnnyder	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 9 is/are rejected.
- 7) ☒ Claim(s) 3-5, 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-211428.

JP 10-211428 discloses a wastewater treatment system, comprising a magnetism adding means for adding magnetism to material to be separated in wastewater, and a magnet for separating the material from the wastewater by collecting the magnetism-added material through the magnetic field generated by the magnet; wherein said magnetism adding means adds magnetism to the material by attaching the material to magnetism-seeded porous material comprising activated carbon. (See the abstract; paragraph [0065]; paragraph [0067])

JP 10-211428 fails to disclose that his magnet is a solenoid-coil type superconducting magnet.

It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention for JP 10-211428's magnet to have been a solenoid-coil type superconducting magnet because that type of magnet is a conventional magnet which is often times used to separate magnetic material from non-magnetic material such as wastewater.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-117142 in view of JP 10-211428.

JP 2000-117142 discloses a wastewater treatment system, comprising a magnetized material to be separated in wastewater, and a superconducting magnet for separating the material from the wastewater by collecting the material on a filter through

the use of a magnetic field generated by a solenoid-coil type superconducting magnet.  
(See the abstract; paragraphs [0003]-[0005])

JP 2000-117142; fails to disclose that his magnetized material is formed by a magnetism adding means which adds magnetism to the material by attaching the material to magnetism-seeded porous material comprising activated carbon.

JP 10-211428 discloses a wastewater treatment system, comprising a magnetism adding means for adding magnetism to material to be separated in wastewater, and a magnet for separating the material from the wastewater by collecting the magnetism-added material through the magnetic field generated by the magnet; wherein said magnetism adding means adds magnetism to the material by attaching the material to magnetism-seeded porous material comprising activated carbon. (See the abstract; paragraph [0065]; paragraph [0067])

It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention for JP 2000-117142 magnetized material to have been formed by adding magnetism to the material if the material to be separated by JP 2000-117142's superconducting magnet was not magnetic to begin with, because as JP 10-211428 teaches even material which is non-magnetic to begin with can be separated with a magnet if you first add magnetism to the non-magnetic material to be separated.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-117142 in view of JP 10-211428 and JP 2003-001243.

JP 2000-117142 discloses a wastewater treatment system, comprising a magnetized material to be separated in wastewater, and a superconducting magnet for separating the material from the wastewater by collecting the material on a filter through the use of a magnetic field generated by a solenoid-coil type superconducting magnet. (See the abstract; paragraphs [0003]-[0005])

JP 2000-117142; fails to disclose that his magnetized material is formed by a magnetism adding means which adds magnetism to the material by attaching the material to magnetism-seeded porous material comprising activated carbon. Furthermore, JP 2000-117142 fails to disclose that his filter comprises a plurality of filters.

JP 10-211428 discloses a wastewater treatment system, comprising a magnetism adding means for adding magnetism to material to be separated in wastewater, and a magnet for separating the material from the wastewater by collecting the magnetism-added material through the magnetic field generated by the magnet; wherein said magnetism adding means adds magnetism to the material by attaching the material to magnetism-seeded porous material comprising activated carbon. (See the abstract; paragraph [0065]; paragraph [0067])

It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention for JP 2000-117142 magnetized material to have been formed by adding magnetism to the material if the material to be separated by JP 2000-117142's superconducting magnet was not magnetic to begin with, because as . JP 10-

211428 teaches even material which is non-magnetic to begin with can be separated with a magnet if you first add magnetism to the non-magnetic material to be separated.

JP 2003-001243 discloses a wastewater treatment system, comprising a magnetized material to be separated in wastewater, and a magnet for separating the material from the wastewater by collecting the material on a filter comprising a plurality of filters (i.e. a multiunit-filter) through the use of a magnetic field generated by a magnet. (See Fig. 2)

It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention for JP 2000-117142's filter to have comprised a multiunit-filter consisting of a plurality of filters as taught by JP 2003-001243 in order to better collect the magnetized material.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Windle in view of JP 10-211428.

Windle discloses a wastewater treatment system for removing comprising magnetic material to be separated from the wastewater; and a means for separating the magnetic material from the wastewater by collecting the magnetic material using a magnetic field generated by a superconducting magnet, the separating means comprising a first and a second magnetic filter connected to an movable in a longitudinal direction through a bore of the superconducting magnet, the movement enabling the first magnetic filter positioned in the magnetic bore to be used for

wastewater treatment while the second magnetic filter is positioned to be backwashed outside the magnet bore. (Fig. 2)

JP 10-211428 discloses a wastewater treatment system, comprising a magnetism adding means for adding magnetism to material to be separated in wastewater, and a magnet for separating the material from the wastewater by collecting the magnetism-added material through the magnetic field generated by the magnet; wherein said magnetism adding means adds magnetism to the material by attaching the material to magnetism-seeded porous material comprising activated carbon. (See the abstract; paragraph [0065]; paragraph [0067])

It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention for Windle's magnetized material to have been formed by adding magnetism to the material if the material to be separated by Windle's superconducting magnet was not magnetic to begin with, because as JP 10-211428 teaches even material which is non-magnetic to begin with can be separated with a magnet if you first add magnetism to the non-magnetic material to be separated.

### ***Allowable Subject Matter***

Claims 3-5, 7 and 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The main reason for the allowance of claims 3-5, 7 and 8 over art is that the prior art of record fails to describe or fairly suggest the apparatus as having all the



limitations claimed as whole and including wherein system further comprises a transfer and wash means for removing a single-unit magnetic filter from an upstream side of said multiunit filter by pushing in another single-unit magnetic filter from a downstream side, and for washing and returning the removed filter from the downstream side again during excitation of the superconducting magnet.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Reifsnyder whose telephone number is (571) 272-1145. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David A Reifsnyder/  
Primary Examiner, Art Unit 1797